

AMENDMENTS TO THE CLAIMS

Claims 1 to 18 (Canceled).

19 (Currently Amended). A prosthesis ~~assembly for replacing system to replace~~ a natural facet joint between ~~a first adjoining inferior and superior vertebral body and a second vertebral body that is immediately inferior to the first vertebral body, the assembly~~ bodies comprising

~~a first component sized to be fixed~~ cephalad prosthesis including a fixation area sized and configured to fix the cephalad prosthesis to the first superior vertebral body and including a first an artificial cephalad facet joint structure adapted to replace including means for replacing a cephalad portion of the natural facet joint on the first superior vertebral body after removal of at least a portion of the cephalad portion of the natural facet joint and at least a portion of a lamina from the first superior vertebral body,

~~a second component sized to be fixed~~ caudal prosthesis including a fixation area sized and configured to fix the caudal prosthesis to the second inferior vertebral body and including a second an artificial caudal facet joint structure adapted to replace including means for replacing the caudad caudal portion of the natural facet joint of the second inferior vertebral body after removal of at least a portion of the caudad caudal portion of the natural facet joint from the second inferior vertebral body,

21 ~~the first and second artificial cephalad facet joint structures~~ structure being adapted and configured to articulate with the artificial caudal facet joint structure to replace the cephalad and caudal portions of the natural comprising an artificial facet joint.

Claim 20 (Canceled).

Claim 21 (Currently Amended). A prosthesis ~~assembly system~~ according to claim 19 ~~or 20~~ wherein at least one of the ~~first and second~~ artificial cephalad and caudal facet joint structures includes a bony in-growth surface.

Claim 22 (Currently Amended). A method of total replacement of a natural facet joint between adjoining inferior and superior vertebral bodies comprising the steps of

providing a prosthesis system comprising a cephalad prosthesis and a caudal prosthesis as defined in claim 19,

removing at least a portion of a cephalad portion of the natural facet joint and at least a portion of a lamina from a first the superior vertebral body,

removing at least a portion of a caudal portion of the natural facet joint from ~~a second~~ the inferior vertebral body ~~immediately inferior to the first vertebral body,~~

fixing ~~a first component~~ the cephalad prosthesis to the ~~first~~ superior vertebral body, ~~the first component including a first artificial facet joint structure adapted to replace the cephalad portion of the natural facet joint after its removal from the first superior vertebral body,~~

fixing ~~a second component~~ the caudal prosthesis to the ~~second~~ inferior vertebral body, ~~the second component including a second artificial facet joint structure adapted to replace the caudad caudal portion of the natural facet joint after its removal from the second inferior vertebral body,~~
and

articulating the ~~first and second artificial facet joint structures~~ cephalad prosthesis and the caudal prosthesis to form an artificial facet joint.

Claim 23 (Canceled).

Claim 24 (New). A prosthesis system according to claim 19

wherein at least one of the cephalad prosthesis and the caudal prosthesis includes a fastening element installed in the fastening area at or near a pedicle.

Claim 25 (New). A prosthesis system according to claim 24

wherein the fastening element comprises a screw.
